

## DDL Commands

1. Create the database named CYBERCOLLEGE and the above tables in the CYBERCOLLEGE database; include the Primary Key Constraint, Referential Integrity Constraints, and Check Constraints.

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 2
Server version: 5.6.12-log MySQL Community Server (GPL)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use cybercollege;
Database changed
mysql> show database;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'database' at line 1
mysql> show cybercollege;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'cybercollege' at line 1
mysql> DROP DATABASE;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '' at line 1
mysql> DROP DATABASE CYBERCOLLEGE;
Query OK, 1 row affected (0.33 sec)

mysql> CREATE DATABASE CYBERCOLLEGE;
Query OK, 1 row affected (0.00 sec)

mysql> use cybercollege;
Database changed
mysql> create table student(stud_No VARCHAR(9) primary key,stud_Fname VARCHAR(20),stud_Lname VARCHAR(30),stud_address VARCHAR(50),stud_city VARCHAR(50),state VARCHAR(20),postalcode VARCHAR(9));
Query OK, 0 rows affected (0.29 sec)

mysql> create table instructor(instructor_id VARCHAR(9) primary key,instructor_Fname VARCHAR(20),instructor_Lname VARCHAR(30),instructor_phone VARCHAR(15));
Query OK, 0 rows affected (0.47 sec)

mysql> create table course(course_code VARCHAR(15) primary key,course_Title VARCHAR(25),course_Hours numeric(2,0),semester VARCHAR(20));
Query OK, 0 rows affected (0.39 sec)

mysql> create table section(section_id VARCHAR(7) primary key,time_offered VARCHAR(10),days_offered VARCHAR(10),section_room VARCHAR(8),class_size numeric(3,0) check (class_size >=0),number_enrolled numeric(3,0) check (number_enrolled >= 0),instructor_id VARCHAR(9) references instructor(instructor_id),course_code VARCHAR(15) references course(course_code));
Query OK, 0 rows affected (0.35 sec)

mysql> create table enrolment(stud_No VARCHAR(9) references student(stud_No),section_id VARCHAR(7) references section(section_id),grade VARCHAR(2));
Query OK, 0 rows affected (2.03 sec)

mysql>
```

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe

mysql> DESC student;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| stud_No | varchar(9) | NO | PRI | NULL | |
| stud_Fname | varchar(20) | YES | | NULL | |
| stud_Lname | varchar(30) | YES | | NULL | |
| stud_address | varchar(50) | YES | | NULL | |
| stud_city | varchar(20) | YES | | NULL | |
| state | varchar(20) | YES | | NULL | |
| postalcode | varchar(9) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
7 rows in set (1.76 sec)

mysql> DESC instructor;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| instructor_id | varchar(9) | NO | PRI | NULL | |
| instructor_Fname | varchar(20) | YES | | NULL | |
| instructor_Lname | varchar(30) | YES | | NULL | |
| instructor_phone | varchar(15) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.03 sec)

mysql> DESC course;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| course_code | varchar(15) | NO | PRI | NULL | |
| course_Title | varchar(25) | YES | | NULL | |
| course_Hours | decimal(2,0) | YES | | NULL | |
| semester | varchar(20) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.12 sec)

mysql> DESC section;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| section_id | varchar(7) | NO | PRI | NULL | |
| time_offered | varchar(10) | YES | | NULL | |
| days_offered | varchar(10) | YES | | NULL | |
| section_room | varchar(8) | YES | | NULL | |
| class_size | decimal(3,0) | YES | | NULL | |
| number_enrolled | decimal(3,0) | YES | | NULL | |
| instructor_id | varchar(9) | YES | | NULL | |
| course_code | varchar(15) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.03 sec)
```

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe

mysql> DESC section;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| section_id | varchar(7) | NO | PRI | NULL | |
| time_offered | varchar(10) | YES | | NULL | |
| days_offered | varchar(10) | YES | | NULL | |
| section_room | varchar(8) | YES | | NULL | |
| class_size | decimal(3,0) | YES | | NULL | |
| number_enrolled | decimal(3,0) | YES | | NULL | |
| instructor_id | varchar(9) | YES | | NULL | |
| course_code | varchar(15) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.03 sec)

mysql> DESC enrolment;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| stud_No | varchar(9) | YES | | NULL | |
| section_id | varchar(7) | YES | | NULL | |
| grade | varchar(2) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.02 sec)

mysql>
```

2.Add a field Country to the STUDENT table with the default value set to 'India'.

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| stud_No | varchar(9) | YES | | NULL | |
| section_id | varchar(7) | YES | | NULL | |
| grade | varchar(2) | YES | | NULL | |
+-----+
3 rows in set (0.02 sec)

mysql> ALTER TABLE student ADD country VARCHAR(15) DEFAULT 'INDIA';
Query OK, 0 rows affected (0.55 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> desc student;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| stud_No | varchar(9) | NO | PRI | NULL | |
| stud_Fname | varchar(20) | YES | | NULL | |
| stud_Lname | varchar(30) | YES | | NULL | |
| stud_address | varchar(50) | YES | | NULL | |
| stud_city | varchar(50) | YES | | NULL | |
| state | varchar(20) | YES | | NULL | |
| postalcode | varchar(9) | YES | | NULL | |
| country | varchar(15) | YES | | INDIA | |
+-----+
8 rows in set (0.02 sec)

mysql>
mysql>
```

3. Add a constraint to the Grade field in the ENROLMENT table that accepts only the values 'A', 'B', 'C' and 'D'.

```
mysql>
mysql> ALTER TABLE enrolment ADD CONSTRAINT grade CHECK(grade='A' OR grade='B' OR grade='C');
Query OK, 0 rows affected (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

4. Modify the ENROLMENT table by changing the width of the field Grade to 2 .

```
mysql> ALTER TABLE enrolment MODIFY grade varchar(2);
Query OK, 0 rows affected (0.12 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql>
```

5. Add a new column, salary to the INSTRUCTOR table and display its modified schema

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe
Records: 0 Duplicates: 0 Warnings: 0

mysql> DESC INSTRUCTOR;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| instructor_id | varchar(9) | NO | PRI | NULL | |
| instructor_fname | varchar(20) | YES | | NULL | |
| instructor_lname | varchar(30) | YES | | NULL | |
| instructor_phone | varchar(15) | YES | | NULL | |
+-----+
4 rows in set (0.06 sec)

mysql> ALTER TABLE instructor ADD salary varchar(10);
Query OK, 0 rows affected (0.55 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> DESC INSTRUCTOR;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| instructor_id | varchar(9) | NO | PRI | NULL | |
| instructor_fname | varchar(20) | YES | | NULL | |
| instructor_lname | varchar(30) | YES | | NULL | |
| instructor_phone | varchar(15) | YES | | NULL | |
| salary | varchar(10) | YES | | NULL | |
+-----+
5 rows in set (0.02 sec)

mysql>
```

6. Drop the column Country from the STUDENT table.

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe
5 rows in set (0.02 sec)

mysql> DESC student;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| stud_No | varchar(9) | NO | PRI | NULL | |
| stud_fname | varchar(20) | YES | | NULL | |
| stud_lname | varchar(30) | YES | | NULL | |
| stud_address | varchar(50) | YES | | NULL | |
| stud_city | varchar(50) | YES | | NULL | |
| state | varchar(20) | YES | | NULL | |
| postalcode | varchar(9) | YES | | NULL | |
| country | varchar(15) | YES | | INDIA | |
+-----+
8 rows in set (0.02 sec)

mysql> ALTER TABLE student DROP COLUMN country;
Query OK, 0 rows affected (0.53 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> DESC student;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| stud_No | varchar(9) | NO | PRI | NULL | |
| stud_fname | varchar(20) | YES | | NULL | |
| stud_lname | varchar(30) | YES | | NULL | |
| stud_address | varchar(50) | YES | | NULL | |
| stud_city | varchar(50) | YES | | NULL | |
| state | varchar(20) | YES | | NULL | |
| postalcode | varchar(9) | YES | | NULL | |
+-----+
7 rows in set (0.07 sec)

mysql>
```

7. Create a view for instructors to display the courses taught by an instructor. Display the personal details but by hiding salary information.

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe

mysql> create view inst as select i.instructor_id,i.instructor_fname,i.instructor_phone,c.course_title from instructor i join course c join section s where i.instructor_id=s.instructor_id and s.course_code=c.course_code;
ERROR 1050 (42501): Table 'inst' already exists
mysql> create view instr as select i.instructor_id,i.instructor_fname,i.instructor_phone,c.course_title from instructor i join course c join section s where i.instructor_id=s.instructor_id and s.course_code=c.course_code;
Query OK, 0 rows affected (0.06 sec)

mysql> desc instr;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| instructor_id | varchar(9) | NO | | NULL | |
| instructor_fname | varchar(20) | YES | | NULL | |
| instructor_phone | varchar(15) | YES | | NULL | |
| course_title | varchar(25) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.03 sec)

mysql> select * from instr;
+-----+-----+-----+-----+
| instructor_id | instructor_fname | instructor_phone | course_title |
+-----+-----+-----+-----+
| 1003 | Sandeep | 8965256823 | AOS |
| 1005 | George | 8928256323 | ASE |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql>
```

## DML Commands

8. Insert details of you and your 5 friends in STUDENT table and the details of 5 instructors with names (Asha, Ashna, Sandeep, Asifa, George) in INSTRUCTOR table.

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe
state | varchar(20) | YES | NULL |
postalcode | varchar(9) | YES | NULL |
7 rows in set (0.02 sec)

mysql> INSERT INTO student VALUES(1,'Lakshmi','C','Avittam','Chelembra','Kerala',6736);
Query OK, 1 row affected (0.03 sec)

mysql> INSERT INTO student VALUES(2,'Ranjana','k','Layam','kannur','Kerala',6756);
Query OK, 1 row affected (0.04 sec)

mysql> INSERT INTO student VALUES(3,'Liya','v','Manjusha','Trivandrum','Kerala',6758);
Query OK, 1 row affected (0.05 sec)

mysql> INSERT INTO student VALUES(4,'Shilpa','k p','Narayaniyam','Kochi','Kerala',6728);
Query OK, 1 row affected (0.40 sec)

mysql> INSERT INTO student VALUES(5,'Manjima','Varghese','Rose','Wayanad','Kerala',6755);
Query OK, 1 row affected (0.04 sec)

mysql> DESC student;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| stud_No | varchar(9) | NO | PRI | NULL | |
| stud_Fname | varchar(20) | YES | | NULL | |
| stud_Lname | varchar(30) | YES | | NULL | |
| stud_address | varchar(50) | YES | | NULL | |
| stud_city | varchar(50) | YES | | NULL | |
| state | varchar(20) | YES | | NULL | |
| postalcode | varchar(9) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.05 sec)

mysql> select * from student;
+-----+-----+-----+-----+-----+-----+
| stud_No | stud_Fname | stud_Lname | stud_address | stud_city | state | postalcode |
+-----+-----+-----+-----+-----+-----+
| 1 | Lakshmi | C | Avittam | Chelembra | Kerala | 6736 |
| 2 | Ranjana | k | Layam | kannur | Kerala | 6756 |
| 3 | Liya | v | Manjusha | Trivandrum | Kerala | 6758 |
| 4 | Shilpa | k p | Narayaniyam | Kochi | Kerala | 6728 |
| 5 | Manjima | Varghese | Rose | Wayanad | Kerala | 6755 |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> DESC instructor;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
|  |  |  |  |  |  |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe
5 rows in set (0.00 sec)

mysql> DESC instructor;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| instructor_id | varchar(9) | NO | PRI | NULL | |
| instructor_fname | varchar(20) | YES | | NULL | |
| instructor_lname | varchar(20) | YES | | NULL | |
| instructor_phone | varchar(15) | YES | | NULL | |
| salary | varchar(10) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.02 sec)

mysql> INSERT INTO instructor VALUES(1001,'Asha','k',896534823,35000);
Query OK, 1 row affected (0.03 sec)

mysql> INSERT INTO instructor VALUES(1002,'Ashna','john',896524823,32000);
Query OK, 1 row affected (0.05 sec)

mysql> INSERT INTO instructor VALUES(1003,'Sandeep','Roy',8965256823,33000);
Query OK, 1 row affected (0.05 sec)

mysql> INSERT INTO instructor VALUES(1004,'Asifa','Abu',8928333323,50000);
Query OK, 1 row affected (0.05 sec)

mysql> INSERT INTO instructor VALUES(1005,'George','G',8928256323,40000);
Query OK, 1 row affected (0.06 sec)

mysql> select * from instructor;
+-----+-----+-----+-----+-----+
| instructor_id | instructor_fname | instructor_lname | instructor_phone | salary |
+-----+-----+-----+-----+-----+
| 1001 | Asha | k | 896534823 | 35000 |
| 1002 | Ashna | john | 896524823 | 32000 |
| 1003 | Sandeep | Roy | 8965256823 | 33000 |
| 1004 | Asifa | Abu | 8928333323 | 50000 |
| 1005 | George | G | 8928256323 | 40000 |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql>
```

9. Add details of the first and second semester courses. Also add a new course for Data Mining with a course code of 20MCA260 worth with credit of 4 hour.

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe
+-----+-----+-----+-----+-----+
| course_code | course_title | course_Hours | semester |
+-----+-----+-----+-----+-----+
| 20MCA101 | MFCS | 4 | 1 |
| 20MCA102 | ADBMS | 3 | 2 |
| 20MCA103 | DFCA | 3 | 1 |
| 20MCA104 | ACN | 4 | 2 |
| 20MCA105 | ADS | 5 | 1 |
| 20MCA106 | AI | 3 | 2 |
| 20MCA107 | ASE | 3 | 1 |
| 20MCA108 | AOS | 4 | 2 |
+-----+-----+-----+-----+-----+
8 rows in set (0.03 sec)

mysql> INSERT INTO course VALUES('20MCA101','MFCS',4,1);
Query OK, 1 row affected (0.05 sec)

mysql> INSERT INTO course VALUES('20MCA103','DFCA',3,1);
Query OK, 1 row affected (0.04 sec)

mysql> INSERT INTO course VALUES('20MCA105','ADS',5,1);
Query OK, 1 row affected (0.04 sec)

mysql> INSERT INTO course VALUES('20MCA107','ASE',3,1);
Query OK, 1 row affected (0.07 sec)

mysql> INSERT INTO course VALUES('20MCA102','ADBMS',3,2);
Query OK, 1 row affected (0.04 sec)

mysql> INSERT INTO course VALUES('20MCA104','ACN',4,2);
Query OK, 1 row affected (0.04 sec)

mysql> INSERT INTO course VALUES('20MCA106','AI',3,2);
Query OK, 1 row affected (0.03 sec)

mysql> INSERT INTO course VALUES('20MCA108','AOS',4,2);
Query OK, 1 row affected (0.05 sec)

mysql> SELECT * FROM COURSE;
+-----+-----+-----+-----+
| course_code | course_title | course_Hours | semester |
+-----+-----+-----+-----+
| 20MCA101 | MFCS | 4 | 1 |
| 20MCA102 | ADBMS | 3 | 2 |
| 20MCA103 | DFCA | 3 | 1 |
| 20MCA104 | ACN | 4 | 2 |
| 20MCA105 | ADS | 5 | 1 |
| 20MCA106 | AI | 3 | 2 |
| 20MCA107 | ASE | 3 | 1 |
| 20MCA108 | AOS | 4 | 2 |
+-----+-----+-----+-----+
8 rows in set (0.03 sec)

mysql> INSERT INTO course VALUES('20MCA260','DATA MINING',4,2);
Query OK, 1 row affected (0.37 sec)
```

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe
mysql> select * from course;
+-----+-----+-----+-----+
| course_code | course_title | course_Hours | semester |
+-----+-----+-----+-----+
| 20MCA101    | MECS        | 4             | 1         |
| 20MCA102    | ADBMS       | 3             | 2         |
| 20MCA103    | DFCA        | 3             | 1         |
| 20MCA104    | ACM         | 4             | 2         |
| 20MCA105    | ADS         | 5             | 1         |
| 20MCA106    | AI          | 3             | 2         |
| 20MCA107    | ASE         | 3             | 1         |
| 20MCA108    | AOS         | 4             | 2         |
| 20MCA260    | DATA MINING| 4             | 2         |
+-----+-----+-----+-----+
9 rows in set (0.00 sec)

mysql>
```

10. Add a new section for this new course with section ID as 301. The section should meet in 2-4 on MW in BLGNG102. The class size should be 35, and number enrolled should be 0. The instructor should be 3, and the course is 20MCA260. Also add sections 302 and 303 for the courses AOS and OB and enroll 5 students each to these courses.



```

c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe
9 rows in set (0.00 sec)

mysql> INSERT INTO section VALUES("301","2-4","mon,wed","BLGNG102",35,0,"3","20MCA260");
Query OK, 1 row affected (0.40 sec)

mysql> SELECT * FROM SECTION;
+-----+-----+-----+-----+-----+-----+-----+-----+
| section_id | time_offered | days_offered | section_room | class_size | number_enrolled | instructor_id | course_code |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 301        | 2-4          | mon,wed      | BLGNG102     | 35         | 0               | 3             | 20MCA260     |
+-----+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> INSERT INTO section VALUES("302","9-10","mon,fri","BLGNL119",35,0,"3","20MCA108");
Query OK, 1 row affected (0.04 sec)

mysql> INSERT INTO section VALUES("305","9-10","mon,fri","BLGNL109",35,0,"1005","20MCA107");
Query OK, 1 row affected (0.03 sec)

mysql> SELECT * FROM SECTION;
+-----+-----+-----+-----+-----+-----+-----+-----+
| section_id | time_offered | days_offered | section_room | class_size | number_enrolled | instructor_id | course_code |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 301        | 2-4          | mon,wed      | BLGNG102     | 35         | 0               | 3             | 20MCA260     |
| 302        | 9-10         | mon,fri      | BLGNL119     | 35         | 0               | 3             | 20MCA108     |
| 305        | 9-10         | mon,fri      | BLGNL109     | 35         | 0               | 1005          | 20MCA107     |
+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql>

```

```

mysql> UPDATE section SET instructor_id="1003" where section_id="302";
Query OK, 1 row affected (0.06 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> select * from section;
+-----+-----+-----+-----+-----+-----+-----+-----+
| section_id | time_offered | days_offered | section_room | class_size | number_enrolled | instructor_id | course_code |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 301        | 2-4          | mon,wed      | BLGNG102     | 39         | 0               | 3             | 20MCA260     |
| 302        | 9-10         | mon,fri      | BLGNL119     | 35         | 0               | 1003          | 20MCA108     |
| 305        | 9-10         | mon,fri      | BLGNL109     | 35         | 0               | 1005          | 20MCA107     |
+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

```

11. Register yourself along with your 3 friends for this new course by adding a row to the ENROLMENT table. The grade should be null.



13. Give a 10% increment in salary for all instructors.

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe
mysql> select * from instructor;
+----+-----+-----+-----+-----+
| instructor_id | instructor_fname | instructor_lname | instructor_phone | salary |
+----+-----+-----+-----+-----+
| 1001          | Asha             | K                | 896534823       | 35000  |
| 1002          | Ashna            | John             | 896524823       | 32000  |
| 1003          | Sandeep          | Roy              | 8965256823      | 33000  |
| 1004          | Asifa            | Abu              | 8928333323      | 50000  |
| 1005          | George           | G                | 8928256323      | 40000  |
+----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> UPDATE instructor SET salary=salary * (salary*10/100);
Query OK, 5 rows affected (0.05 sec)
Rows matched: 5  Changed: 5  Warnings: 0

mysql> select * from instructor;
+----+-----+-----+-----+-----+
| instructor_id | instructor_fname | instructor_lname | instructor_phone | salary |
+----+-----+-----+-----+-----+
| 1001          | Asha             | K                | 896534823       | 38500  |
| 1002          | Ashna            | John             | 896524823       | 35200  |
| 1003          | Sandeep          | Roy              | 8965256823      | 36300  |
| 1004          | Asifa            | Abu              | 8928333323      | 55000  |
| 1005          | George           | G                | 8928256323      | 44000  |
+----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql>
```

14. Delete Section 302 and verify for the rows in ENROLMENT table for that section

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe
Server version: 5.6.12-log MySQL Community Server (GPL)

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use cybercollege;
Database changed
mysql> select * from section;
+----+-----+-----+-----+-----+-----+-----+
| section_id | time_offered | days_offered | section_room | class_size | number_enrolled | instructor_id | course_code |
+----+-----+-----+-----+-----+-----+-----+
| 301        | 2-4          | mon,wed      | BLGN6102    | 39         | 0                | 3             | 20MCA260    |
| 302        | 9-10         | mon,fri      | BLGNL119    | 35         | 0                | 1003          | 20MCA188    |
| 305        | 9-10         | mon,fri      | BLGNL109    | 35         | 0                | 1005          | 20MCA107    |
+----+-----+-----+-----+-----+-----+
3 rows in set (0.10 sec)

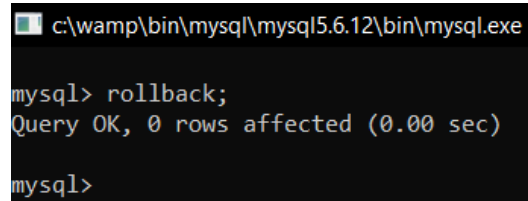
mysql> delete from section where section_id=302;
Query OK, 1 row affected (0.18 sec)

mysql> select * from section;
+----+-----+-----+-----+-----+-----+-----+
| section_id | time_offered | days_offered | section_room | class_size | number_enrolled | instructor_id | course_code |
+----+-----+-----+-----+-----+-----+-----+
| 301        | 2-4          | mon,wed      | BLGN6102    | 39         | 0                | 3             | 20MCA260    |
| 305        | 9-10         | mon,fri      | BLGNL109    | 35         | 0                | 1005          | 20MCA107    |
+----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql>
```

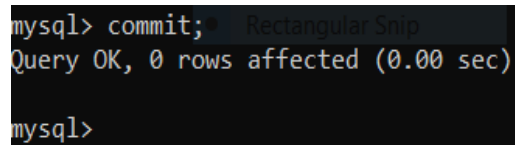
## TCL COMMANDS

15. Undo the previous delete operation



```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe  
mysql> rollback;  
Query OK, 0 rows affected (0.00 sec)  
mysql>
```

16. Save all the transactions to the database.



```
mysql> commit;  
Query OK, 0 rows affected (0.00 sec)  
mysql>
```

17. Grant the privilege to read and delete from the ENROLMENT table to the User U1.

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe

mysql> use cybercollege;
Database changed
mysql> commit;
Query OK, 0 rows affected (0.00 sec)

mysql> create user 'U1' identified by '1234';
Query OK, 0 rows affected (0.07 sec)

mysql> select user FROM mysql.user;
+-----+
| user |
+-----+
| U1   |
| root |
| root |
| root |
+-----+
5 rows in set (0.00 sec)

mysql> GRANT select,delete ON enrolment TO U1;
Query OK, 0 rows affected (0.00 sec)

mysql> show grants for 'U1';
+-----+
| Grants for U1@% |
+-----+
| GRANT USAGE ON *.* TO 'U1'@'%' IDENTIFIED BY PASSWORD '**A4B6157319038724E3560894F7F932C8886EBFCF' |
| GRANT SELECT, DELETE ON `cybercollege`.`enrolment` TO 'U1'@'%' |
+-----+
2 rows in set (0.00 sec)

mysql> REVOKE delete ON enrolment FROM U1;
Query OK, 0 rows affected (0.04 sec)

mysql> SHOW GRANTS FOR 'U1';
+-----+
| Grants for U1@% |
+-----+
| GRANT USAGE ON *.* TO 'U1'@'%' IDENTIFIED BY PASSWORD '**A4B6157319038724E3560894F7F932C8886EBFCF' |
| GRANT SELECT ON `cybercollege`.`enrolment` TO 'U1'@'%' |
+-----+
2 rows in set (0.00 sec)

mysql> select * from instructor;
+-----+
| instructor_id | instructor_fname | instructor_lname | instructor_phone | salary |
+-----+
| 1001         | Asha            | k                | 896534823       | 38500  |
+-----+
```

## 18. Revoke the delete privilege from U1.

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe

mysql> select user FROM mysql.user;
+-----+
| user |
+-----+
| U1   |
| root |
| root |
| root |
+-----+
5 rows in set (0.00 sec)

mysql> GRANT select,delete ON enrolment TO U1;
Query OK, 0 rows affected (0.00 sec)

mysql> show grants for 'U1';
+-----+
| Grants for U1@% |
+-----+
| GRANT USAGE ON *.* TO 'U1'@'%' IDENTIFIED BY PASSWORD '**A4B6157319038724E3560894F7F932C8886EBFCF' |
| GRANT SELECT, DELETE ON `cybercollege`.`enrolment` TO 'U1'@'%' |
+-----+
2 rows in set (0.00 sec)

mysql> REVOKE delete ON enrolment FROM U1;
Query OK, 0 rows affected (0.04 sec)

mysql> SHOW GRANTS FOR 'U1';
+-----+
| Grants for U1@% |
+-----+
| GRANT USAGE ON *.* TO 'U1'@'%' IDENTIFIED BY PASSWORD '**A4B6157319038724E3560894F7F932C8886EBFCF' |
| GRANT SELECT ON `cybercollege`.`enrolment` TO 'U1'@'%' |
+-----+
2 rows in set (0.00 sec)

mysql>
```

## Accessing database (SELECT, Filtering using WHERE, HAVING, GROUP BY, ORDER BY Clauses, Subquery)

19. Display the full name and contact details of students living in Kochi.

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe
5 rows in set (0.00 sec)

mysql> select * from student;
+----+-----+-----+-----+-----+-----+-----+
| stud_No | stud_Fname | stud_Lname | stud_address | stud_city | state | postalcode |
+----+-----+-----+-----+-----+-----+-----+
| 1 | Lakshmi | C | Avittam | Chelembra | Kerala | 6736 |
| 2 | Ranjana | k | Layam | kannur | Kerala | 6756 |
| 3 | Liya | v | Manjusha | Trivandrum | Kerala | 6758 |
| 4 | Shilpa | k p | Narayaniyam | Kochi | Kerala | 6728 |
| 5 | Manjima | Varghese | Rose | Wayanad | Kerala | 6755 |
+----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select stud_Fname,stud_Lname,stud_address from student where stud_city='kochi';
+-----+-----+-----+
| stud_Fname | stud_Lname | stud_address |
+-----+-----+-----+
| Shilpa | k p | Narayaniyam |
+-----+-----+-----+
1 row in set (0.00 sec)

mysql>
```

20. List the student details who has longest first name.

```

c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe
mysql> select * from student;
+----+-----+-----+-----+-----+-----+
| stud_No | stud_Fname | stud_Lname | stud_address | stud_city | state | postalcode |
+----+-----+-----+-----+-----+-----+
| 1 | Lakshmi | C | Avittam | Chelembra | Kerala | 6736 |
| 2 | Ranjana | k | Layam | kannur | Kerala | 6756 |
| 3 | Liya | v | Manjusha | Trivandrum | Kerala | 6758 |
| 4 | Shilpa | k p | Marayaniyam | Kochi | Kerala | 6728 |
| 5 | Manjima | Varghese | Rose | Wayanad | Kerala | 6755 |
+----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select * from student where length(stud_Fname)=(select max(length(stud_Fname)) from student);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'student)' at line 1
mysql> select * from student where length(stud_Fname)=(select max(length(stud_Fname)) from student);
+----+-----+-----+-----+-----+-----+
| stud_No | stud_Fname | stud_Lname | stud_address | stud_city | state | postalcode |
+----+-----+-----+-----+-----+-----+
| 1 | Lakshmi | C | Avittam | Chelembra | Kerala | 6736 |
| 2 | Ranjana | k | Layam | kannur | Kerala | 6756 |
| 5 | Manjima | Varghese | Rose | Wayanad | Kerala | 6755 |
+----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql>

```

21. Display the name and phone number of the instructors who is handling the courses AOS and ADBMS.

```

c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe
mysql> select * from instructor;
+----+-----+-----+-----+-----+
| instructor_id | instructor_Fname | instructor_Lname | instructor_phone | salary |
+----+-----+-----+-----+-----+
| 1001 | Asha | k | 896534823 | 38500 |
| 1002 | Ashna | john | 896524823 | 35200 |
| 1003 | Sandeep | Roy | 8965256023 | 36300 |
| 1004 | Asifa | Abu | 8928333323 | 55000 |
| 1005 | George | G | 8928256323 | 44000 |
+----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select * from section;
+----+-----+-----+-----+-----+-----+-----+
| section_id | time_offered | days_offered | section_room | class_size | number_enrolled | instructor_id | course_code |
+----+-----+-----+-----+-----+-----+-----+
| 301 | 2-4 | mon,wed | BLNG102 | 39 | 0 | 3 | 20MCA260 |
| 302 | 9-10 | mon,fr | BLGL119 | 35 | 0 | 3 | 20MCA108 |
| 305 | 9-10 | mon,fr | BLGL109 | 35 | 0 | 1005 | 20MCA107 |
+----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> select * from course;
+----+-----+-----+-----+
| course_code | course_Title | course_Hours | semester |
+----+-----+-----+-----+
| 20MCA101 | MFCS | 4 | 1 |
| 20MCA102 | ADBMS | 3 | 2 |
| 20MCA103 | DFCA | 3 | 1 |
| 20MCA104 | ACH | 4 | 2 |
| 20MCA105 | ADS | 5 | 1 |
| 20MCA106 | AI | 3 | 2 |
| 20MCA107 | ASE | 3 | 1 |
| 20MCA108 | AOS | 4 | 2 |
| 20MCA260 | DATA MINING | 4 | 2 |
+----+-----+-----+-----+
9 rows in set (0.00 sec)

mysql> select * from section;
+----+-----+-----+-----+-----+-----+-----+
| section_id | time_offered | days_offered | section_room | class_size | number_enrolled | instructor_id | course_code |
+----+-----+-----+-----+-----+-----+-----+
| 301 | 2-4 | mon,wed | BLNG102 | 39 | 0 | 3 | 20MCA260 |
| 302 | 9-10 | mon,fr | BLGL119 | 35 | 0 | 3 | 20MCA108 |
| 305 | 9-10 | mon,fr | BLGL109 | 35 | 0 | 1005 | 20MCA107 |
+----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> select instructor_Fname,instructor_phone from instructor i join course c join section s where i.instructor_id=s.instructor_id and s.course_code=c.course_code and c.course_Title='AOS' or 'ADBMS';

```

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe

mysql> select instructor_fname,instructor_phone from instructor i join course c join section s where i.instructor_id=s.instructor_id and s.course_code=c.course_code and c.course_title='AOS' or 'ADBS';
Empty set, 1 warning (0.03 sec)

mysql> UPDATE section SET instructor_id="1003" where section_id="302";
Query OK, 1 row affected (0.06 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> select * from section;
+-----+-----+-----+-----+-----+-----+-----+-----+
| section_id | time_offered | days_offered | section_room | class_size | number_enrolled | instructor_id | course_code |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 301        | 2-4          | mon,wed      | BLGNG102     | 39         | 0                | 3             | 20MCA260    |
| 302        | 9-10         | mon,fri      | BLGML119     | 35         | 0                | 1003          | 20MCA108    |
| 305        | 9-10         | mon,fri      | BLGML109     | 35         | 0                | 1005          | 20MCA107    |
+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> select instructor_fname,instructor_phone from instructor i join course c join section s where i.instructor_id=s.instructor_id and s.course_code=c.course_code and c.course_title='AOS' or 'ADBS';
+-----+-----+
| instructor_fname | instructor_phone |
+-----+-----+
| Sandeep          | 8965256823       |
+-----+-----+
1 row in set, 1 warning (0.00 sec)

mysql>
```

22. List the codes, titles, and credit hours for courses worth 4 hours. Order the results in descending order of course code.

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe

3 rows in set (0.00 sec)

mysql> select course_code,course_title,course_hours from course where course_hours=4 order by course_code desc;
+-----+-----+-----+
| course_code | course_title | course_hours |
+-----+-----+-----+
| 20MCA260    | DATA MINING | 4             |
| 20MCA108    | AOS          | 4             |
| 20MCA104    | ACH          | 4             |
| 20MCA101    | MECS         | 4             |
+-----+-----+-----+
4 rows in set (0.00 sec)

mysql>
```



23. Display the names of the students in the descending order along with their phone number.

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe
mysql> select * from student;
+----+-----+-----+-----+-----+-----+-----+
| stud_No | stud_Fname | stud_Lname | stud_address | stud_city | state | postalcode |
+----+-----+-----+-----+-----+-----+-----+
| 1 | Lakshmi | C | Avittam | Chelembra | Kerala | 6736 |
| 2 | Ranjana | k | Layam | kannur | Kerala | 6756 |
| 3 | Liya | v | Manjusha | Trivandrum | Kerala | 6758 |
| 4 | Shilpa | k p | Narayaniyam | Kochi | Kerala | 6728 |
| 5 | Manjima | Varghese | Rose | Wayanad | Kerala | 6755 |
+----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select stud_Fname,stud_Lname from student order by stud_Fname desc;
+-----+-----+
| stud_Fname | stud_Lname |
+-----+-----+
| Shilpa | k p |
| Ranjana | k |
| Manjima | Varghese |
| Liya | v |
| Lakshmi | C |
+-----+-----+
5 rows in set (0.00 sec)

mysql>
mysql>
```

24. List the student's name, course code and section id grouping the students by their grade.

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe
mysql> rollback;
Query OK, 0 rows affected (0.00 sec)

mysql> select * from student;
+----+-----+-----+-----+-----+-----+-----+
| stud_No | stud_Fname | stud_Lname | stud_address | stud_city | state | postalcode |
+----+-----+-----+-----+-----+-----+-----+
| 1 | Lakshmi | C | Avittam | Chelembra | Kerala | 6736 |
| 2 | Ranjana | k | Layam | kannur | Kerala | 6756 |
| 3 | Liya | v | Manjusha | Trivandrum | Kerala | 6758 |
| 4 | Shilpa | k p | Narayaniyam | Kochi | Kerala | 6728 |
| 5 | Manjima | Varghese | Rose | Wayanad | Kerala | 6755 |
+----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.31 sec)

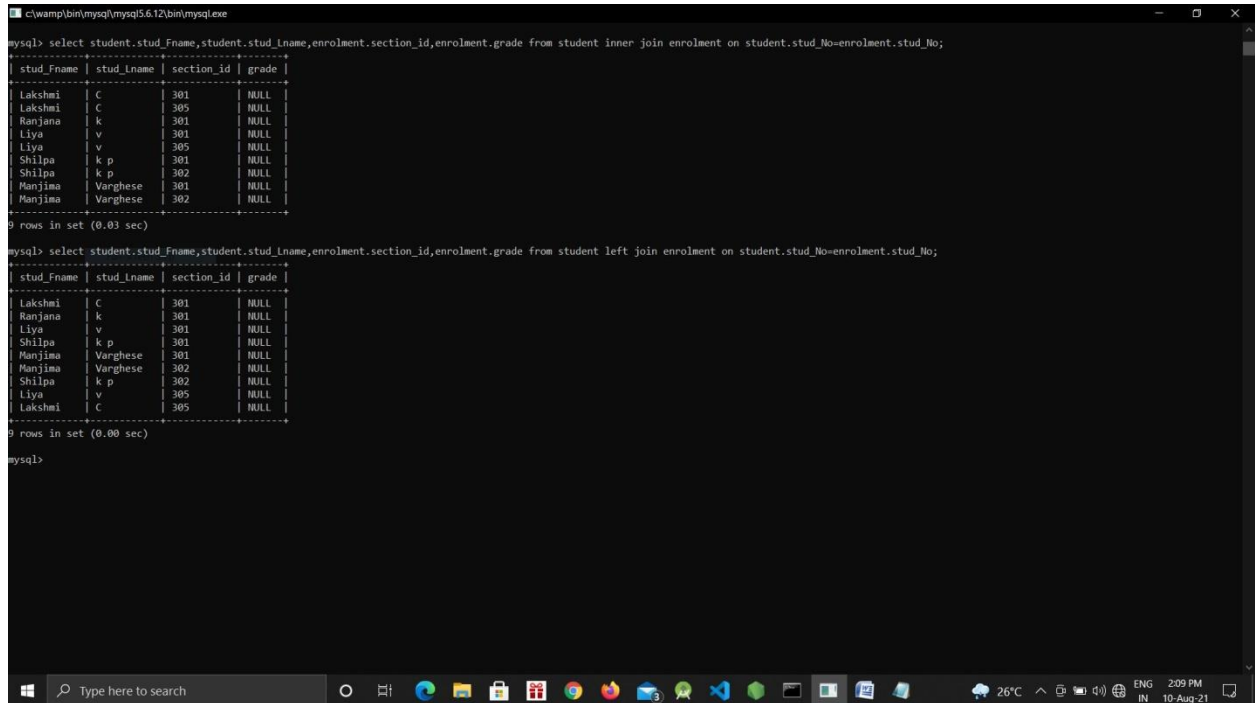
mysql> select student.stud_Fname,student.stud_Lname,section.course_code,enrolment.section_id from student inner join section inner join enrolment on student.stud_No=enrolment.stud_No and section_id=enrolment.se
ction_id group by enrolment.grade;
ERROR 1052 (23000): Column 'section_id' in on clause is ambiguous

mysql> select student.stud_Fname,student.stud_Lname,section.course_code,enrolment.section_id from student inner join section inner join enrolment on student.stud_No=enrolment.stud_No and section.section_id=enro
lment.section_id group by enrolment.grade;
+-----+-----+-----+-----+
| stud_Fname | stud_Lname | course_code | section_id |
+-----+-----+-----+-----+
| Lakshmi | C | 20MCA260 | 301 |
+-----+-----+-----+-----+
1 row in set (0.03 sec)

mysql>
```

## Optimizing databases (Join, Aggregate & Set operations, Other operators like arithmetic, logical, special etc)

25. Use an inner join between the STUDENT and ENROLMENT tables for showing the full name, Section id and Grade.



```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe
mysql> select student.stud_fname,student.stud_lname,enrolment.section_id,enrolment.grade from student inner join enrolment on student.stud_No=enrolment.stud_No;
+-----+-----+-----+-----+
| stud_fname | stud_lname | section_id | grade |
+-----+-----+-----+-----+
| Lakshmi   | C          | 301        | NULL  |
| Lakshmi   | C          | 305        | NULL  |
| Ranjana   | k          | 301        | NULL  |
| Liya      | v          | 301        | NULL  |
| Liya      | v          | 305        | NULL  |
| Shilpa    | k p        | 301        | NULL  |
| Shilpa    | k p        | 302        | NULL  |
| Manjima   | Varghese   | 301        | NULL  |
| Manjima   | Varghese   | 302        | NULL  |
+-----+-----+-----+-----+
9 rows in set (0.03 sec)

mysql> select student.stud_fname,student.stud_lname,enrolment.section_id,enrolment.grade from student left join enrolment on student.stud_No=enrolment.stud_No;
+-----+-----+-----+-----+
| stud_fname | stud_lname | section_id | grade |
+-----+-----+-----+-----+
| Lakshmi   | C          | 301        | NULL  |
| Lakshmi   | C          | 305        | NULL  |
| Ranjana   | k          | 301        | NULL  |
| Liya      | v          | 301        | NULL  |
| Liya      | v          | 305        | NULL  |
| Shilpa    | k p        | 301        | NULL  |
| Shilpa    | k p        | 302        | NULL  |
| Manjima   | Varghese   | 301        | NULL  |
| Manjima   | Varghese   | 302        | NULL  |
| Shilpa    | k p        | 305        | NULL  |
| Lakshmi   | C          | 305        | NULL  |
+-----+-----+-----+-----+
11 rows in set (0.00 sec)

mysql>
```

26. Use an outer join between the STUDENT and ENROLMENT tables for showing the full name, Section id and Grade. Include all the students regardless of whether they have a matching

section.

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe
mysql> select student.stud_fname,student.stud_lname,enrolment.section_id,enrolment.grade from student inner join enrolment on student.stud_No=enrolment.stud_No;
+-----+-----+-----+-----+
| stud_fname | stud_lname | section_id | grade |
+-----+-----+-----+-----+
| Lakshmi   | C         | 301       | NULL  |
| Lakshmi   | C         | 305       | NULL  |
| Ranjana   | k         | 301       | NULL  |
| Liya      | v         | 301       | NULL  |
| Liya      | v         | 305       | NULL  |
| Shilpa    | k p       | 301       | NULL  |
| Shilpa    | k p       | 302       | NULL  |
| Manjima   | Varghese  | 301       | NULL  |
| Manjima   | Varghese  | 302       | NULL  |
+-----+-----+-----+-----+
9 rows in set (0.03 sec)

mysql> select student.stud_fname,student.stud_lname,enrolment.section_id,enrolment.grade from student left join enrolment on student.stud_No=enrolment.stud_No;
+-----+-----+-----+-----+
| stud_fname | stud_lname | section_id | grade |
+-----+-----+-----+-----+
| Lakshmi   | C         | 301       | NULL  |
| Ranjana   | k         | 301       | NULL  |
| Liya      | v         | 301       | NULL  |
| Shilpa    | k p       | 301       | NULL  |
| Manjima   | Varghese  | 301       | NULL  |
| Manjima   | Varghese  | 302       | NULL  |
| Shilpa    | k p       | 302       | NULL  |
| Liya      | v         | 305       | NULL  |
| Lakshmi   | C         | 305       | NULL  |
+-----+-----+-----+-----+
9 rows in set (0.00 sec)

mysql>
```

27. Give a 7% salary raise to instructors whose salary is less than the average.

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe
mysql> update instructor set salary=salary+(salary*7/100) where salary < (select avg(salary));
Query OK, 0 rows affected (0.00 sec)
Rows matched: 0 Changed: 0 Warnings: 0

mysql> select * from instructor;
+-----+-----+-----+-----+-----+
| instructor_id | instructor_fname | instructor_lname | instructor_phone | salary |
+-----+-----+-----+-----+-----+
| 1001          | Asha             | k                | 896534823       | 38500  |
| 1002          | Ashna            | john             | 896524823       | 35200  |
| 1003          | Sandeep          | Roy              | 8965256823      | 36300  |
| 1004          | Asifa            | Abu              | 8928333323      | 55000  |
| 1005          | George           | G                | 8928256323      | 44000  |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql>
```

28. List full name and salary of instructors whose last name ends with 'a' and earns highest salary.

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe

mysql> select * from instructor;
+-----+-----+-----+-----+-----+
| instructor_id | instructor_fname | instructor_lname | instructor_phone | salary |
+-----+-----+-----+-----+-----+
| 1001          | Asha             | k               | 896534823       | 38500  |
| 1002          | Ashna           | john            | 896524823       | 35200  |
| 1003          | Sandeep          | Roy             | 8965256823      | 36300  |
| 1004          | Asifa            | Abu             | 8928333323      | 55000  |
| 1005          | George           | G               | 8928256323      | 44000  |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select instructor_fname,salary from instructor where salary=(select max(salary) from instructor) and instructor_fname in(select instructor_fname from instructor where instructor_fname like 'A%');
+-----+-----+
| instructor_fname | salary |
+-----+-----+
| Asifa            | 55000  |
+-----+-----+
1 row in set (0.00 sec)

mysql>
```

29. Display the details of instructor who draws lowest salary.

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe

mysql> select * from instructor;
+-----+-----+-----+-----+-----+
| instructor_id | instructor_fname | instructor_lname | instructor_phone | salary |
+-----+-----+-----+-----+-----+
| 1001          | Asha             | k               | 896534823       | 38500  |
| 1002          | Ashna           | john            | 896524823       | 35200  |
| 1003          | Sandeep          | Roy             | 8965256823      | 36300  |
| 1004          | Asifa            | Abu             | 8928333323      | 55000  |
| 1005          | George           | G               | 8928256323      | 44000  |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select * from instructor where salary=(select min(salary) from instructor);
+-----+-----+-----+-----+-----+
| instructor_id | instructor_fname | instructor_lname | instructor_phone | salary |
+-----+-----+-----+-----+-----+
| 1002          | Ashna           | john            | 896524823       | 35200  |
+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql>
```

30. List the students details who lived in Kochi, Kerala or in Bangalore, Karnataka or both

```
c:\wamp\bin\mysql\mysql5.6.12\bin\mysql.exe

mysql> select * from student;
+----+-----+-----+-----+-----+-----+-----+
| stud_No | stud_Fname | stud_Lname | stud_address | stud_city | state | postalcode |
+----+-----+-----+-----+-----+-----+-----+
| 1 | Lakshmi | C | Avittam | Chelembra | Kerala | 6736 |
| 2 | Ranjana | k | Layam | kannur | Kerala | 6756 |
| 3 | Liya | v | Manjusha | Trivandrum | Kerala | 6758 |
| 4 | Shilpa | k p | Narayaniyam | Kochi | Kerala | 6728 |
| 5 | Manjima | Varghese | Rose | Mayanad | Kerala | 6755 |
+----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select * from student where stud_city='Kochi' or 'Bangalore' and 'karnataka' or stud_city in('Kochi','Bangalore','karnataka');
+----+-----+-----+-----+-----+-----+-----+
| stud_No | stud_Fname | stud_Lname | stud_address | stud_city | state | postalcode |
+----+-----+-----+-----+-----+-----+-----+
| 4 | Shilpa | k p | Narayaniyam | Kochi | Kerala | 6728 |
+----+-----+-----+-----+-----+-----+-----+
1 row in set, 1 warning (0.00 sec)

mysql>
```